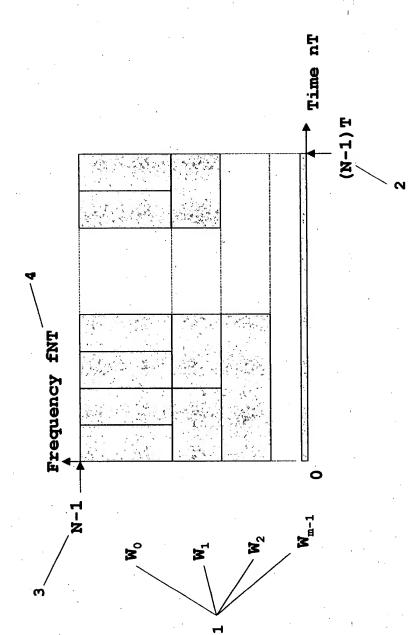
FIG. 1 Wavelet Tiling of an N-Point Digital t-f Space



Wavelet Iterated Filter Bank for Tiling t-f Space in FIG. FIG.

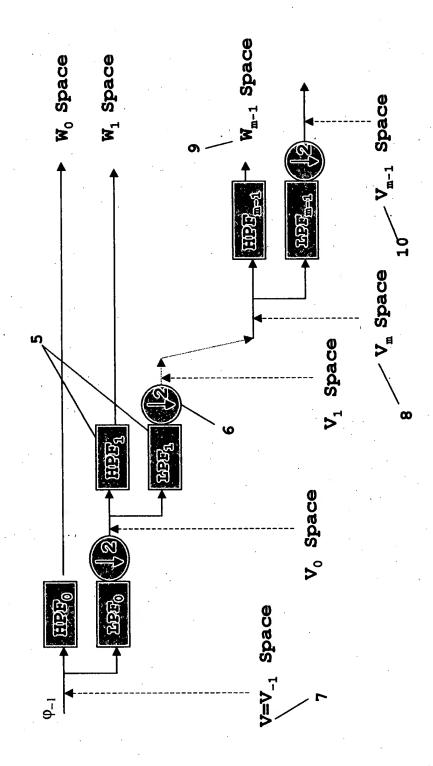


FIG. 3 PSD Requirements for Communications

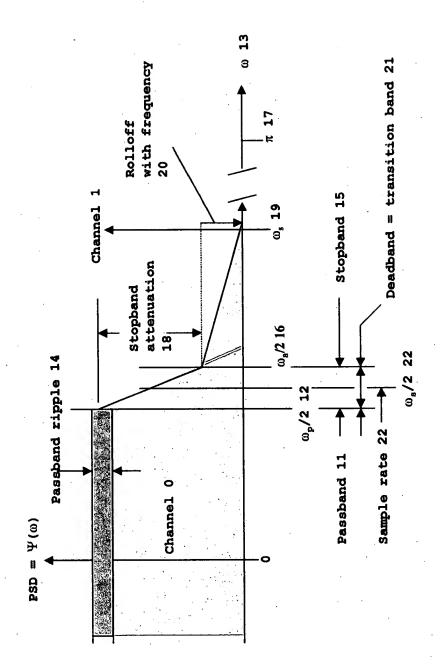
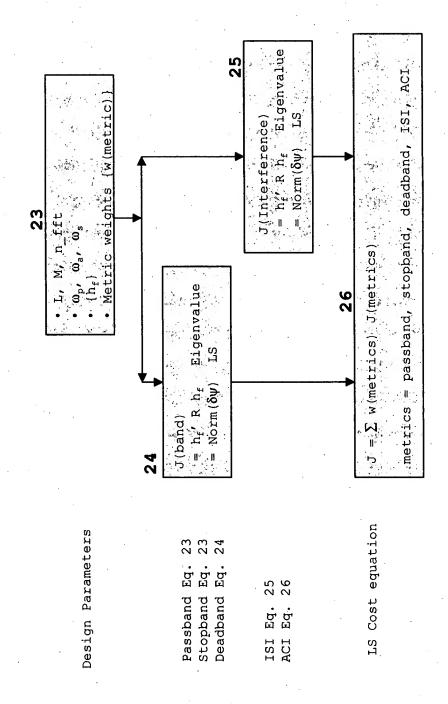


FIG. 4 LS Metrics and Cost Function



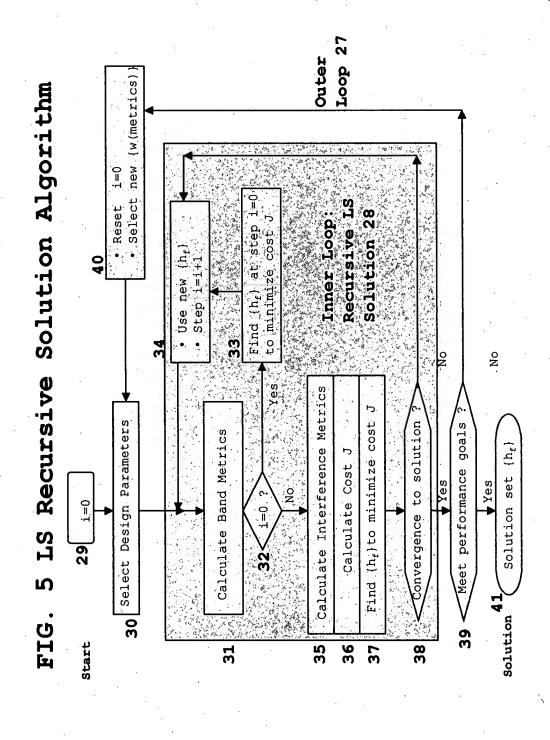


FIG. 5 Mother Wavelet: Eigenvalue Algorithm

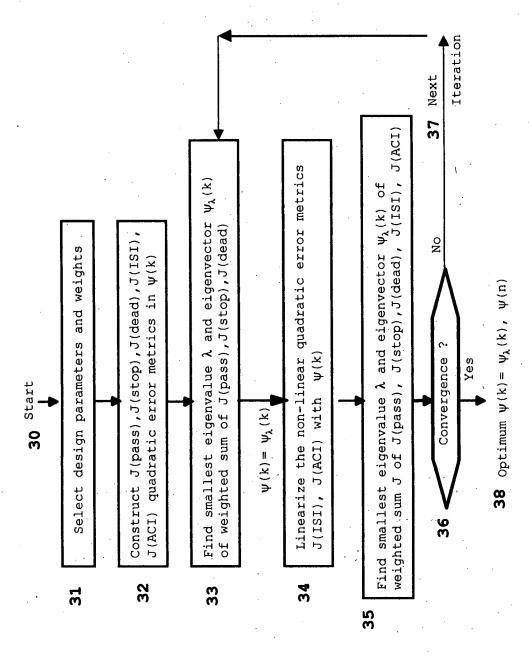
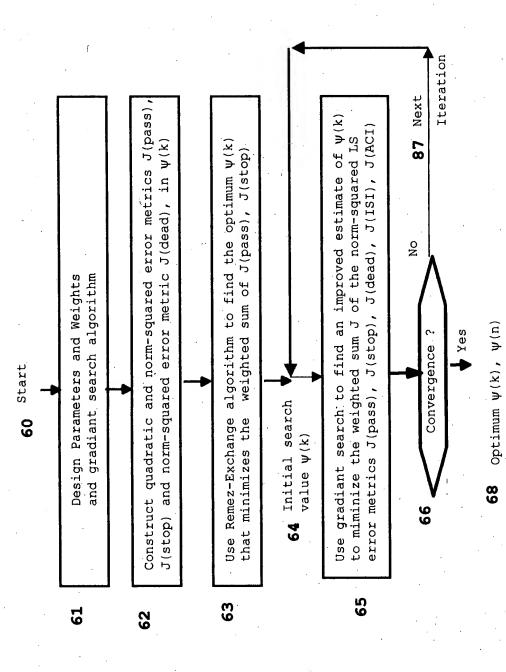
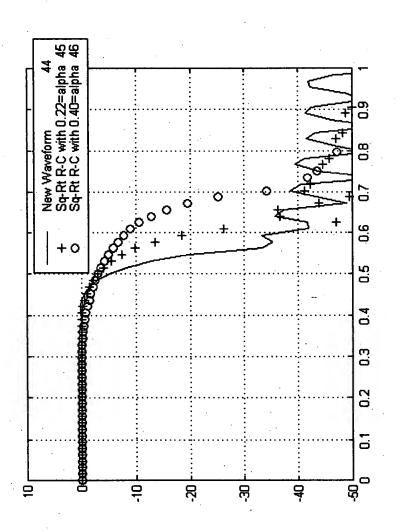


FIG. 6 Mother Wavelet: Gradiant Search Algorithm



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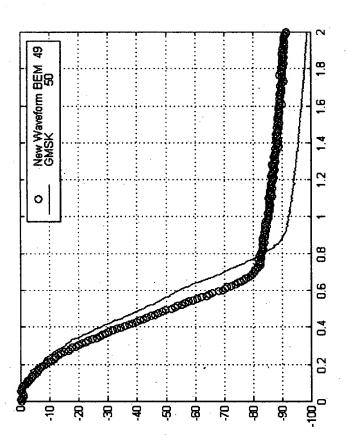
PSD for New Waveform and Square-Root Raised-Cosine FIG.



Power spectral density PSD,

Normalized frequency, symbol rate

FIG. 9 PSD for New Waveform BEM and GMSK

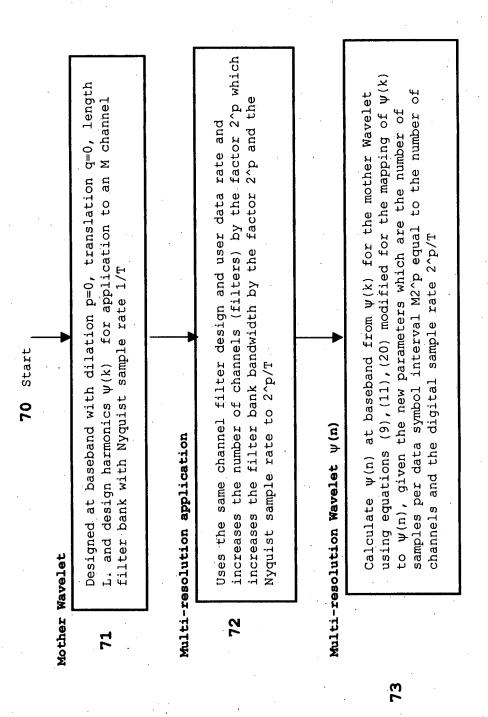


Normalized frequency,

bit rate

Power spectral density PSD, dB 47

# 7 Mother Wavelet: Multi-Resolution Algorithm



Radar Ambiguity Functions of New Waveform and Unweighted Chirp Waveform 10

